

СИГНОЛ И СВОЙСТВА СТАЛИ

Д.Ф.Черного	Исследования влияния электромагнитного облучения на свойства стали.
К.С.Прохоров	Разработка электромагнитных методов в стали.
Л.М.Кузнецов	Исследования электромагнитных методов в стали.
Ю.А.Носов	Исследования электромагнитных методов в стали.
Н.Г.Горюхов	Исследования электромагнитных методов в стали.
В.Я.Васильев	Исследования электромагнитных методов в стали.
В.Г.Гуров	Структурные изменения в стали.
С.А.Иванов	Исследования электромагнитных методов в стали.
В.К.Новиков	Исследования электромагнитных методов в стали.
А.С.Лобов	Исследования электромагнитных методов в стали.
В.Г.Козлов	Исследования электромагнитных методов в стали.
С.М.Гуров	Исследования электромагнитных методов в стали.
В.М.Тарасов	Исследования электромагнитных методов в стали.
Ю.Д.Смирнов	Исследования электромагнитных методов в стали.
В.М.Тарасов	Исследования электромагнитных методов в стали.
Ю.Д.Смирнов	Исследования электромагнитных методов в стали.
А.М.Марков	Исследования электромагнитных методов в стали.
В.С.Романов	Исследования электромагнитных методов в стали.
Ю.А.Носов	Исследования электромагнитных методов в стали.
В.П.Мельников	Исследования электромагнитных методов в стали.

Report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow— 30 Jan 1959.

PLATE I BOOK EXTRACTATION SOV/199

Leningrad. Politekhnikeskii Institut

Sovremennye dostizheniya litseynogo proizvodstva (Recent Achievements in Foundry) (Technological Institute of the Scientific and Technical Conference of Schools of Higher Education, Moscow, March 1950. 130 p. Kirets slip inserted. 1,000 copies printed.

Red. Ed.: Yu. A. Nishchad, Doctor of Technical Sciences, Professor, Leningrad. N. O. Ginzburg, Doctor of Technical Sciences, Professor, Leningrad. L. P. Labkov, Doctor of Technical Sciences, Professor on Heavy Machine Building, Tech. Ed. Department (Mashinostroyeniye); Ye. F. Naimov, Professor, Department (Mashinostroyeniye); and L. V. Shchegolev.

Purpose: This book is intended for the technical personnel of foundries. It may be used by students of the field.

Contents: This collection of articles discusses problems in foundry processes. Individual articles treat the melting of metals and their alloys, mechanization and automation of casting processes, aspects of the manufacture of steel, cast iron and nonferrous metal castings. No personalities are mentioned. References accompany individual articles.

Recent Achievements in Foundry (cont.) SOV/199

18. Maslennikov, L. V. Investigation of New Types of Poul 148 for Cupolas
 19. Gofman, M. V. and P. Ya. Nefedov. New Methods of 154 Producing Cupola Coke
 20. Gornobayev, I. S. Utilization of the Steel and Cast 159 Iron Chips in the Industry
 21. Gornobayev, I. S. Temperature Regime of the Pouring (at 165 Casting) of Hydro turbine Blades
 22. Bilyk, Y. Ya. Laboratory Methods of Measuring the 169 Temperature of Molten Metals
- IV. PROBLEMS OF MOLD MAKING
23. Berg, P. P. Dimensional Accuracy of Castings 178
 24. Obolentsev, A. D. Generation of Adhesion Forces 183 Between the Nonmetallic Layer (Pick-up) and the Casting
- Card 5/9

GRUZIN, V.G., kand.tekhn.nauk

Selecting efficient temperature conditions in the production of
steel castings. [Trudy] TSNITMASH 97:22-49 '60. (MIRA 13:8)
(Steel castings) (Founding)

S/137/62/000/006/131/163
A052/A101

AUTHOR: Gruzin, V. G.

TITLE: New methods of determining casting properties of high-temperature alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 80, abstract 61503 (V sb. "Novoye v liteyn. proiz-ve. No. 3", 1960, 216 - 237)


TEXT: New methods of determining the temperature of molten metal, its flowability, linear shrinkage, tendency to hot crack and film formations are described. To measure the temperature from 1,150 to 1,850°C W-Mo thermocouples and electronic automatic potentiometers are used. The temperature can be measured by a short immersion or by placing stationary thermocouples in the lining of the ladle and also by inserting a thermocouple in the riser or central tube to measure the temperature of metal flow. W-Mo thermocouples are 300 times cheaper and have a 2.5 times longer service time than Pt/Rh-Pt thermocouples. For measuring flowability a new "helical probe" method is developed. By this method a dry rod having an inside helical canal of triangular cross-section of $8 \times 7 \text{ mm}^2$ is put on

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S/137/62/000/006/131/163
A052/A101

New methods of determining casting...

the W-Mo thermocouple. When the thermocouple is immersed to different depths into the alloy the latter fills the helical probe to different lengths depending on its flowability, and the potentiometer records the temperature of the metal. When the spiral is taken out its length is measured by means of a graduated plexiglass cylinder. The described method broadens the temperature range of the flowability investigation from the liquidus temperature to the zero flowability temperature. To determine the linear shrinkage a sample is poured, one end of which is fixed against the flask and the other butts against an invar pin moving the free end of a thin elastic plate. Pickups connected in an electric resistance bridge are pasted on the plate. A shrinkage of the sample causes a bend of the plate which is accompanied by a change of electromotive force on the output terminals of the bridge. A preliminary graduation of the pickups is made. By means of the same device the tendency of samples to hot crack formation is determined. The tendency to film formation on the molten metal surface is determined by the pulse temperature of a radiation pyrometer directed to the surface of the metal cooling off in a crucible. A repeated overheating without deoxidation contributes to an earlier film formation. The tendency to film formation is determined by reading the temperature of molten deoxidized metal at the first cooling after remelting



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New methods of determining casting...

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the fresh charge. The higher the temperature at which a jump of the pulse of the radiation pyrometer is observed, the stronger the tendency of the metal to film formation.

N. Kalinkina

[Abstracter's note: Complete translation]

Card 3/3

Dr. E. V. G. and ...

"Steel Quality and the Quality of the Surface of the Casting Product
on the Parameters of the Mould and the Casting Process"

report presented at the 3rd Conference on the Interaction of the Casting Mold
and the Casting, sponsored by the Inst. of Mechanical Engineering, Acad. Sci.
USSR, 16-18 January 1968.

GRUZIN, Vadim Georgiyevich; ZINGER, S.L., red. izd-va; VAYNSHTEYN,
Ye.B., tekhn. red.

[Temperature conditions in steel casting] Temperaturnyi rezhim
lit'ia stali. Moskva, Metallurgizdat, 1962. 350 p.
(MIRA 15:12)

(Steel--Metallurgy)
(Liquid metals--Thermal properties)

GERUZIN, V.I.

BEL'SKIY, B.M. [deceased]; BUR'YANOV, V.F.; VASIL'YEV, Ye.P.; VITKINA, E.I.;
GALLAY, Ya.S.; LEVIN, G.I.; MATVYEV, Yu.M.; CHALYUSTKIN, A.B.;
ROKOTYAN, Ye.S., red.; ISTOMIN, A.B., red.; GERUZIN, V.I., red.;
NEPOMNYASHCHIY, N.I., red. izd-va; KARASEV, A.I., tekhn. red.

[Ferrous metallurgy in capitalistic countries] Chernaya metallurgiya
kapitalisticheskikh stran. Pt.4. [Rolling mill production] Prokatnoe
i trubnoe proizvodstvo. Bel'skii, B.M. and others. Moskva, Gos.
nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii.
1958. 627 p. (MIRA 11:7)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Forging) (Rolling (Metalwork)) (Pipe, Steel)

CHELYUSTKIN, Aleksandr Borisovich; GRUZIN, V.I., red.; DOKUKINA, Ye.V..
red.izd-va; DOBUZHINSKAYA, L.V., tekhn.red.

[Use of computer techniques for the control of metallurgical
equipment] Primenenie vychislitel'noi tekhniki dlia upravleniia
metallurgicheskimi agregatami. Moskva, Gos.nauchno-tekhn.izd-vo
lit-ry po chernoi i tsvetnoi metallurgii, 1960. 187 p.

(MIRA 13:3)

(Metallurgical plants--Equipment and supplies)
(Automatic control) (Electronic calculating machines)

TERESHCHENKO, Konstantin Konstantinovich; GRUZIN, V.I., red.; KISELEVA,
T.I., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Automatic control of electric motors with short-circuited
rotors at metallurgical plants] Avtomaticheskoe upravlenie
elektrodvigateliami s korotkozamknutym rotorom v metallurgi-
cheskom proizvodstve. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry
po chernoi i tsvetnoi metallurgii, 1960. 247 p.

(MIRA 14:1)

(Electric motors)

(Metallurgical plants--Electric equipment)

BOGACHEV, Aleksandr Mikhaylovich; LYAMBAKH, Romul'd Vital'evich;
GRUZIN, V.I., red.; LARIONOV, G.Ye., tekhn. red.

[Equipment for the automatic control of the dimensions of rolled products] Pribory avtomaticheskogo kontrolya razmerov produkata. Moskva, Gosenergoizdat, 1962. 111 p. (Biblioteka po avtomatike, no.57) (MIRA 15:9)
(Rolling(Metalwork)) (Automatic control)

ZAREZANKOV, Georgiy Khristovich; GRUZIN, V.I., red.; GOLYATKINA,
A.G., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Photoelectronic instruments for the automatic measurement
control of rolled products] Fotoelektronnye pribory avto-
maticheskogo kontrolia razmerov prokata. Moskva, Metallurg-
izdat, 1962. 151 p. (MIRA 16:5)

(Rolling (Metalwork))
(Photoelectric measurements)

Grozman, V. P.

"The Control of Temperature of Liquid Steel."

Hydrodynamics of Molten Metals (Gidrodinamika rasplavlennyykh metalov; trudy pervogo soveshchaniia po teorii liteinykh protsessov. Moskva, Izd-vo Akad. nauk SSSR, 1958, 257 pp.

(Proceedings of the First Conference on the Theory of Casting Processes)

Central Research Institute of Technology and Machinery

GRUZINA, Ye. A.

Gruzina, Ye. A. - "Some etiological and epidemiological premises of acute parenchymatous hepatitis," Vracheb. delo, 1949, No. 2, columns 119-22

SO: U-3566, 15 March 53, (Istopolis 'Zhurnal'nykh Statey, No. 11, 1949).

GRUZINA, Ye.A., kand.med.nauk

Oxyhemometry in cardiovascular and pulmonary diseases. Vrach.delo
no.1:1323 D '58. (MIRA 12:3)

1. Kafedra propedevtiki vnutrennikh bolezney (zav. - prof. TS.A.
Levina) Odesskogo meditsinskogo instituta.
(BLOOD--OXYGEN CONTENT)

LEVINA, TS.A., prof., GRUZINA, Ya.A., dots., VASIL'YEVA, N.A., ROMANOVSKAYA, A.I.,
YAGODKINA, N.I., PAVLOVA, O.V.

Treating stenocardia with nitranol. Sov.med. 22 no.8:119-126 Ag '58
(MIRA 11:10)

1. Iz propedevticheskoy terapevticheskoy kliniki (zav. r prof.
TS.A. Levina) Odesskogo meditsinskogo instituta imeni N.I. Pirogova
(dir. prof. I.Ya. Deyneka).

(ANGINA, PECTORIS, ther.
aminotrate (Rus))

(NITRITES, ther. use
aminotrate in angina pectoris (Rus))

GRUZINA, Ye.A., kand.med.nauk (Odessa)

Effectiveness of treating circulatory insufficiency with certain
new glycosides. Klin.med. 36 no.8:138-144 Ag '58 (MIRA 11:9)

1. Iz kafedry propedevтики vnutrennikh bolezney (zav. - prof.
TS.A. Levina) Odesskogo meditsinskogo instituta imeni N.I. Pirogova
(dir. - zaslyzhennyy deyatel' nauki prof. I.Ya. Deyneka).

(CARDIAC GLYCOSIDES, ther. use

corgicone & kendoride in congestive heart failure (Rus))

LEVINA, TS.A., prof.; DUBOVYY, Ye.D., prof.; GRUZINA, Ye.A., dotsent

Treatment of cardiovascular diseases and circulatory insufficiency with radioactive iodine. Vrach, delo no.2:201 # '60.

(MIRA 13:6)

1. Kafedra propedevitiki vnutrennikh bolezney (zav. - prof. TS.A. Levina) i kafedra rentgenologii i radiologii (zav. - prof. Ye.D. Dubovyy) Odesskogo meditsinskogo instituta.

(CARDIOVASCULAR SYSTEM--DISEASES) (IODINE--ISOTOPES)

GRUZINA, Ye.A., kand.med.nauk

Periplocin therapy for patients with circulatory insufficiency.
Sov. med. 24 no. 2:45-51 F '60. (MIRA 14:2)

1. Iz kafedry propedevтики vnutrennikh bolezney (zav. - prof. TS.A
Levina) Odesskogo meditsinskogo instituta imeni N.I. Pirogova
(direktor - prof. I.Ya. Deyneka).
(CARDIAC GLYCOSIDES)

GRUZINA, Ye.A.

Electrocardiographic changes in patients with disorders of
coronary circulation during nitranol therapy. Khim. i med.
no.16:61-64 '61. (MIRA 17:8)

GRUZINA, Ye.A., dotsent

Comparative evaluation of the effect of periplocin and other cardiac drugs on circulatory insufficiency. Sov.med. 25 no.7:38-42 J1 '61.
(MIRA 15:1)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - prof. TS.A.Levina) Odesskogo meditsinskogo instituta imeni N.I.Pirogova (dir. - zasluzhennyy deyatel' nauki USSR prof. I.Ya.Deynoka).
(BLOOD CIRCULATION, DISORDERS OF)
(CARDIAC GLYCOSIDES) (PERIPLOCIN)

LEVINA, TS.A., prof.; GRUZINA, Ye.A., dotsent; DMITRIYEVA, I.T.;
ROMANOVSKAYA, A.I.; SIVOKONEVA, N.A.; YAGODKINA, N.I.

Treatment with persanthine of stenocardia. Vrach.delo no.10:20-26
O '62. (MIRA 15:10)

1. Kafedra propedevtiki vnutrennikh bolezney (zav. - prof. TS.A.
Levin) Odesskogo meditsinskogo instituta.
(ANGINA PECTORIS) (PYRIMIDINES)

GRUZINA, Ye.A., dotsent

Rate of the blood flow determined by the method of oxyhemo-
metry in cardiovascular diseases. Vrach. delo no.12:122-123
D '63. (MIRA 17:2)

1. Kafedra propedevtiki vnutrennikh bolezney (zav. - prof.
TS.A. Levina) Odesskogo meditsinskogo instituta.

LEVINA, TS.A., prof.; GRUZINA, Ye.A., dotsent; DMITRIYEVA, I.T.;
ROMANOVSKAYA, A.I.; SIVOKONEVA, N.A.; YAGODKINA, N.I.

Study of the effectiveness of the spasmolytic agent distafen
(etafen) in stenocardia. Sov. med. 27 no.12:103-106 0 '64.
(MIRA 18:11)

1. Ob"yedinennaya kafedra propedevniki vnutrennikh bolezney
(zav.- prof. TS.A. Levina) Odesskogo meditsinskogo instituta
imeni Pirogova.

USSR / Farm Animals. Cattle.

Q-2

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54766.

Author : Panyushkin, A. N., Gruzinov, A. A., Kolodezhnyy
I. S., Golovina, Z. T.

Inst : Not given.

Title : On the Effect of Certain Concentrates Upon the
Weight Increase and Fat Deposition in Young
Cattle.

Orig Pub: Tr. Chkalovskiy n.-i. in-t molochno-myasn. sko-
tovodstva, 1956, vyp. 10, 299-305.

Abstract: Following the summer period of growing and pas-
ture, four groups (six heads in each) of Aber-
deen-Astrakhan castrated young bulls were formed,
taking into account age, live weight and degree
of fatness. During 40 days of fattening on pas-
ture, the animals were receiving the following

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USSR / Farm Animals. Cattle.

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APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000617130002-1"

Abstract: supplements; 1st group - 3 kg. millet meal; 2nd
group - 1.5 kg. millet meal plus 1.5 kg. crushed
barley; 3rd group - 3 kg. crushed barley; 4th
group (control) was fed pasture only. The fol-
lowing average daily weight gains were obtained
per each group (in g.): 1,005, 1,085, 925,
625. The fat deposition (in kg.) and caloricity
of meat (Cal. in one kg.) were 21.1 and 2,893,
18.6 and 2,655, 20.9 and 2,636, 16.1 and 2,463,
respectively.

Card 2/2

GRUZINOV, A.I.

VENDROV, Semen Leonidovich,; GROSHEV, Aleksandr Afanas'yevich,; ISAKOV,
Nikolay Mikhaylovich,; SERGEYEV, Leonid Aleksandrovich,; SHEPSHELEVICH,
Iosif Mikhaylovich,; VELICHKO, Viktor Aleksandrovich,; BLIZNYAK,
Ye. V., doktor tekhn. nauk, prof., red.; GRUZINOV, A.I., retsenzent,;
KUDRITSKIY, D.M., red.; VOLCHOK, K.M., tekhn. red.

[Modern techniques of hydrographic research] Sovremennaya tekhnika
gidrograficheskikh izyskaniy. Leningrad, Izd-vo "Rechnoi transport,"
Leningr. otd-nie, 1957. 170 p. (MIRA 11:12)
(Hydrographic surveying)

GRUZINOV, A.P.

Toward a wider introduction of resistance welding at the welding centers. Stroi.truboprov. 9 no.11:28-29 N '64.

(MIRA 18:2)

1. Stroitel'no-montazhnoye upravleniye No.12 tresta Yuzhgazprovedstroy, Rostov-na-Donu.

RESHETNIKOV, N.S., dotsent; GRUZINOV, A.V., inzh.; KHAZOV, I.I., inzh.;
PETRILEVICH, N.A., tekhnik; MERZHANOVA, O.M., red.izd-va;
PARAKHINA, N.L., tekhn.red.

[Album of drawings of parts with repair dimensions and additional parts (pieces) for the MAZ-200/501 motortrucks] Al'bom chertezhei detalei remontnykh razmerov i dopolnitel'nykh detalei (nasadkov) avtomobilis MAZ-200/501. Moskva, Goslesbumizdat. (Tipovaya tekhnologiya remonta lesosagotovitel'nykh mashin i mekhanizmov). Pt.2. (Detali shassi avtomobilis MAZ-200. 1960. 130 p. (MIRA 13:11)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti. 2. Nachal'nik laboratorii tipovoy tekhnologii remonta mashin i organizatsii remontnykh predpriyatiy TSentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Reshetnikov).
(Motortrucks--Maintenance and repair)

GRUZINOV, F.

Cement head. Neftianik 7 no.2:22 F '62.
(Oil wells—Equipment and supplies)

(MIRA 15:2)

GRUZINOV, F., inzh.

Press for wells. Neftianik 7 no.3:24 Mr '62. (MIRA 15:5)

1. TSekh kapital'nogo remonta neftepromyslovogo upravleniya
Khadyzhenneft'.

(Oil well casing)

GRUZINOV, F.F.

Catch for the "Krasnoe Sormovo"-type elevator. Bezop.truda
v prom. 3 no.4:30 Ap '59. (MIRA 12:6)

1. Neftepromyslovoye upravleniye Khadyzhenneft'.
(Elevators)

GRUZINOV, F.F.

Dismountable metal scaffold for production derricks. Bezop.
truda v prom. 3 no.10:33 0 '59. (MIRA 13:2)

1. Neftepromyslovoye upravleniye Khadyzhenneft'.
(Oil fields--Equipment and supplies)

GRUZINOV, F.F., inzh.

Rotor starting mechanism mounted on a tract hoist consisting of a lever and a claw clutch. Neftianik 7 no.9:10 S '62.

(MIRA 16:7)

1. TSekh kapital'nogo remonta skvazhin neftepromyslovogo upravleniya tresta Khadyzhenskoy neftyanoy promyshlennosti.
(Oil wells—Equipment and supplies)

KONOVALOV, K.D.; GRUZINOV, K.V.

Investigating blast furnace combustion zones. Trudy Ural politekh.
inst. no.105:18-29 '60. (MIRA 14:3)
(Blast furnaces—Combustion)

GRUZINOV, P.Ye.

Laboratory equipment for studying the principles of agricultural production. Politekh. obuch. no.3:54-57 Mr '57. (MLRA 10:5)

1. Predsedatel' seksii agropriborostroyeniya Moskovskogo otdeleniya VMO "Priborproma."
(Agriculture--Study and teaching)

GRUZINOV, I.

Fire at a petroleum tank farm. Pozh.delo 6 no.10:17-18 0 '60.
(MIRA 13:10)

(Petroleum industry---Fires and fire prevention)

GRUZINOV, V.

Changes in the character of labor in the European people' democracies. Sots. trud. 5 no. 11:39-48 N '60. (MIRA 14:1)
(Europe, Eastern—Labor and laboring classes)
(Europe, Eastern—Socialist competition)

GRUZINOV, V.; GEL'BRAS, V.

"Improving the forms of industrial management in the European
people's democracies." Reviewed by V.Gruzinov, V.Gel'bras. Vop.
ekon. no.4:124-129 Ap '62. (MIRA 15:4)
(Europe, Eastern--Industrial management)

GRUZINOV, V.

Differentiating the wage rates of the first category in the
industry of socialist countries abroad. Sots.trud 7 no.3:34-40
Mr '62. (MIRA 15:3)
(Europe, Eastern--Wage payment systems)

GRUZINOV, V.; GORFAN, K.

Incentive wage systems in the agriculture of socialist
countries. Vop. ekon. no.11:148-155 N '62. (MIRA 15:11)
(Europe, Eastern—Agricultural wages)

GRUZINOV, V.

Issuing bonuses to workers in the industry of the European socialist
countries. Vop. ekon. no.6:64-72 Je '63. (MIRA 16:6)
(Europe, Eastern--Bonus system)

GEUZINOV, V.I.

Applying the complete probability theorem to calculations of water supply of perennial river-discharge regulations. Nauch. dokl. vys. shkoly; energ. no.1:115-119 '58. (MIRA 11:10)

1. Rekomendovano kafedroy gidroenergetiki Moskovskogo energeticheskogo instituta.

(Hydraulic engineering)

8(6), 14(6)

SOV/112-59-5-8653

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5, p 37 (USSR)

AUTHOR: Gruzinov, V. I.

TITLE: River-Runoff Regulation Over Many Years In Case of Two Cascade-Operated Hydroelectric Power Plants

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Energetika, 1958, Nr 3, pp 117-125

ABSTRACT: In order to determine the planned firm power of two hydroelectric cascade plants, formulae are developed for the probability distribution functions for filling the reservoirs and a two-dimensional function of probability distribution for simultaneous filling of both reservoirs. The probability-distribution density is connected with the unknown firm power by a simple relationship. The simplest case of constant-output regulation of both plants is considered; in this case, the probability distribution curves for filling each reservoir can be constructed independently. Bibliography: 6 items.

Ye.A.B.

Card 1/1

GRUZINOV, V. I., Candidate Tech Sci (diss) -- "Perennial regulation of a river flow in the case of parallel operation of two hydroelectric plants in a cascade". Moscow, 1959. 18 pp (Min Higher Educ USSR, Moscow Order of Lenin Power Engineering Inst) (KL, No 24, 1959, 136)

KLENNIKOV, Vladimir Mikhaylovich; GRUZINOV, Vasilii Il'ich [deceased];
PLEKHANOV, I.P., red.; GALAKTIONOVA, Ye.N., tekhn.red.

[Handbook for first-class automobile drivers] Uchebnik shofera
pervogo klassa. Izd.2., perer. i dop. Moskva, Nauchno-tekhn.
izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR,
1960. 359 p. (MIRA 13:11)

(Automobile drivers)

GRUZIMOV, V.; TKACHEVA, T.

Awarding bonuses to workers for creating and mastering new machinery
in several European socialist countries. Sots.trud 8 no.3:144-148
Mr '63. (MIRA 16:3)

(Europe, Eastern—~~Bonus~~ system)
(Europe, Eastern—~~Technological~~ innovations)

Grigoriy V. K. PROPERTIES OF REFRACTORY BRICK
AT CHASOV YAR, SEMLUKI, AND BOROVICH WORKS
Soviet *Met.*, 1936 (10), 16-19. The chemical composi-
tion and physical properties of firebrick used for the con-
struction of blast furnaces should satisfy certain re-
quirements. The various physical properties of fire
brick of the above mentioned works are studied. These
brick have the following properties: (1) The volume of
open pores for Chasov Yar brick is 5.5 to 10%, in the mean,
for Semluki brick 11.5 to 13.5%, and for Borovich brick
12.5 to 14.5%, in the mean. (2) The total porosity of
Chasov Yar brick is 11.5 to 19.5%, of Semluki brick 21
to 25%, and of Borovich brick 24.5 to 27.5%, in the mean.
(3) In respect to chemical composition, the Semluki and
Borovich brick Al_2O_3 content is 37 to 40%, and that of
Chasov Yar brick is 32 to 36%. The content of Fe_2O_3
in all these brick varies from 1.5 to 2.5%.

GRUZINOV, V.K.; LEONIDOV, N.K., inzhener, retsenzent; GRIGOR'YEV, G.G.,
kandidat tekhnicheskikh nauk, redaktor; DUGINA, N.A., tekhnicheskiy
redaktor

[Mechanical equipment of blast furnace plants] Mekhanicheskoe obo-
rudovanie domennykh tsukhov. Izd. 2-e, dop. i perer. Moskva, Gos.
nauchno-tekhn. izd-vo mashinostroit. lit-ry. Pt. 1. 1954. 503 p.
[Microfilm] (MLRA 8:3)
(Blast furnaces) (Metallurgy--Apparatus and supplies)

GRUZINOV, V.K. kandidat tekhnicheskikh nauk

The horizontal distribution of ores in blast-furnace tops. Stal'
15 no.4:305-311 Ap '55. (MLRA 8:6)

1. Ural'skiy politekhnicheskiy institut.
(Blast furnaces)

MIKHAYLOV, V.V., doktor tekhnicheskikh nauk, professor, redaktor; ~~GRUZINOV~~
~~Vladimir Konstantinovich~~, kandidat tekhnicheskikh nauk, redaktor;
POPEL', Stanislav Iosifovich, kandidat tekhnicheskikh nauk; KEL'NIK,
V.P., redaktor; ZMF, Ye.M., tekhnicheskii redaktor

[Physical and chemical principles of the blast furnace process and
the modern method of producing cast iron; transactions of a conference
convoked by the Metallurgical Institute of the Ural Affiliate of the
U.S.S.R. Academy of Science, March 23-27, 1955] Fiziko-khimicheskie
osnovy domennogo protsesssa i sovremennaya praktika proizvodstva
chuguna; trudy soveshchaniia, sozvannogo Institutom metallurgii
Ural'skogo filiala AN SSSR i Magnitogorskim metallurgicheskim kombina-
tom, 23-27 marta 1955 g.g. Magnitogorsk. Pod red. V.V.Mikhailova.
Sverdlovsk, Gos.nauchno-tekhn. izd-vo lit-ry po cherno i tsvetnoi
metallurgii, Sverdlovskoe otd-nie, 1956. 403 p. (MLRA 10:3)

1. Akademiya nauk SSSR. Ural'skiy filial, Sverdlovsk. Institut
metallurgii.

(Blast furnaces) (Cast iron--Metallurgy)

GRUZINOV, V. K.

✓ 361*. (Russian.) The Question of the Movement of Charge in the Blast Furnace. *K voprosu o dvizhenii stalla shikhly v domennoi pechi*. V. K. Gruzinov. *Stal*, v. 16, no. 9, Sept. 1958, p. 771-773.

Materials descend in the blast furnace because of the coke burning in the tuyere zone, and because of fusion and partial gasification on the way. The braking effect of the hosh is found to be exaggerated.

WATER *L*

Ural. Polytech. Inst.

Gruzinov, V. K.

137-1958-1-315 D

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 48 (USSR)

AUTHOR: Gruzinov, V. K.

TITLE: Analysis of the Theory and Investigation of the Methods of Controlling the Working of Blast Furnaces by Programmed Charging
(Analiz teorii i issledovaniye metodov regulirovaniya khoda domennykh pechey programmnoy zagruzkoy)

ABSTRACT: Bibliographic entry on the Author's dissertation for the degree of Doctor of Technical Sciences, presented to the Leningr. politekhn. in-t (Leningrad Polytechnic Institute), Leningrad, 1957

ASSOCIATION: Leningr. politekhn. in-t (Leningrad Polytechnic Institute), Leningrad

1. Blast furnaces--Operation--Analysis 2. Blast furnaces--Operation--Bibliography

Card 1/1

KITAYEV, Boris Ivanovich; YAROSHENKO, Yuriy Gavrilovich; SUCHKOV,
Valerian Danilovich; GRUZINOV, V.K., red.; LUCHKO, Yu.V., red.
izd-va; ZEF, Ye.M., tekhn.red.

[Heat exchange in shaft furnaces] Teploobmen v shakhtnykh
pechakh. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po cherno
i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1957. 279 p.

(MIRA 11:1)

(Furnaces) (Heat--Transmission)

(Handwritten: Grekov, P. N.)
AUTHORS: Grekov, P. N., Eng. and Gruzinov, V. K. Docent. (Urals Polytechnical Institute). ³⁵⁷
TITLE: On the automation of horizontal distribution of burden in blast furnaces. (K avtomatizatsii gorizonta'l'nogo raspredeleniya shikhty v domennykh pechakh).
PERIODICAL: "Stal'" (Steel), 1957, No.4, pp.300-304 (U.S.S.R.)
ABSTRACT: The possibility of automising the operation of the burden distributor proposed by A. S. Ayukov is outlined. The above distributor (Fig.1) differs from the usual one in that it does not rotate, instead a rotating hopper with an exentric outlet is set over it (Fig.1). The proposed automation is based on impulses from a number of thermocouples placed on the periphery of the furnace throat. The electric circuit is described (Fig.2). The arrangement is such that ore charges are dropped on the zone of the hottest thermocouple and coke charge onto the coolest zone. Automation of the usual distributor is also possible, but the scheme in this case is more complicated as an automatic correction of displacement angle is required. The scheme proposed is explained. Thermocouples placed in the gas oftakes can also be used for the correction of the burden distribution. The method used in the Azovstal' Works (not automatic) is described. There are 5 diagrams, 1 tables and 2 Russian references.

GRUZINOV, B.K.; SMOLYAK, V.A., inzhener.

"Flow of gases in blast furnaces" by L.N.Chernov, Reviewed by
B.K.Gruzinov, V.A.Smoliak. Stal' 17 no.2:691-692 Ag '57.
(MIRA 10:7)

1. Ural'skiy politekhnicheskiy institut (for Gruzinov). 2. Dnepro-
petrovskiy metallurgicheskiy institut (for Smolyak).
(Blast furnaces) (Gas flow)

AUTHOR: Gruzinov, V. K.

SOV/163-58-3-14/49

TITLE: The Problem of the Motion of the Charge in the Melting Furnace (K voprosu o dvizhenii stolba shikhty v domennoy pechi)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 3, pp 76 - 80 (USSR)

ABSTRACT: In melting furnaces an interaction between the shell lining and the charge takes place. It is necessary to take into consideration the friction between the charge materials and the wall. Thereby the friction coefficient as well as the work performed by the frictional forces are taken into account. The friction coefficient is: $\phi = \tan \varphi = 0.7$. The tangent of the angle of inclination between the wall and the center-line of the shaft amounts to

$\tan \alpha_{sh} = \frac{1.315}{16} = 0.08225$. The work of the friction forces amounts to $A_{sh} = 0.8 \text{ tm/sec}$. Figure 2 shows the

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The Problem of the Motion of the Charge in the Melting Furnace SOV/163-98-3-14/49

distribution of work of the friction forces across the elements of the vertical sections of the shaft furnace. A considerable decrease of the friction forces is obtained by the increase of the angle of inclination between the wall and the center-line. In figure 3 the interdependence between the ratio of the friction forces and the volume of the furnaces is shown. The curve plotted tends to show a decrease of the friction forces where the effective volume of the furnace is raised. There are 3 figures, 1 table, and 1 reference, which is Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

SUBMITTED: October 4, 1957

Card 2,2

SOV/133-58-6-4/33

AUTHORS: Fialkov, B.S., Engineer and Gruzinov, V.K., Doctor of Technical Sciences

TITLE: The Influence of the Position of the Combustion Zone on the Operation of a Blast Furnace (Vliyaniye raspolozheniya zony goreniya na rabotu domennoy pechi)

PERIODICAL: Stal', 1958, nr 6, pp 495 - 502 (USSR).

ABSTRACT: The relationship between the parameters of the combustion zone and the distribution of materials in the throat is discussed in the light of literature data (mainly Russian references are quoted) and authors' own investigations of the combustion zone of two furnaces and studies of the burden descent on the blast furnace models. During the authors' investigations at constant blowing conditions, the length of the combustion zone varied from 1 200 to 1 800 mm. This variation they think was due to the thermal state of the hearth as generally with shorter combustion zones the content of silicon in iron was higher. If the hearth becomes cooler, the heat transfer from the combustion zone increases, thus the temperature of the combustion zone decreases, the length of the combustion zone increases and the combustion process takes place in a bigger volume. This is demonstrated in Figure 1,

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The Influence of the Position of the Combustion Zone on the Operation of a Blast Furnace

where the ratio of the length of combustion zone to the distance from the tuyere nozzle to the focal point of combustion is plotted against the intensity of combustion in the focal point of the combustion zone. The latter was characterised by the concentration of CO_2 in the focal point. According to the

authors, the kinetic energy of blast can influence only the initial part of the combustion zone. This influence becomes obvious only on attaining a certain level of kinetic energy, different for different furnaces. Apparently, at low kinetic energy of the blast stream, it is pierced by lumps of coke near to the tuyere nozzle and the combustion starts in the whole volume of the stream. At a higher value of the kinetic energy of the blast stream, the lumps of coke cannot pierce the stream near the tuyere nozzle and the combustion process near the tuyere nozzle takes place only on the periphery of the stream (Figures 2 and 3). The gas permeability of the burden column also has an influence on the length of the combustion zone; the latter increases with decreasing permeability. The blast temperature has little influence on the position of the focal point of the combustion zone. On the other hand, the charging

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SC1/133-58-6-4/33

The Influence of the Position of the Combustion Zone on the
operation of a Blast Furnace

sequence (CCOOL or OOCCL) has an influence on the position of the focal point of the combustion zone. This is explained by the influence of the velocity of the removal of combustion products which will depend on the gas permeability of the burden layer above the combustion zone. As the largest decrease in the volume of the solid phase (40-50%) in the burden column and a corresponding increase in the permeability are observed on the level of melting (in places of maximum accumulation of ore) therefore, a high gas permeability of the column is attained on the vertical of the sector of the most intensive melting of ore. The decrease in the packing density of the burden depends to a large extent on the velocity of its descent. From the work on models (Figure 4), the maximum rate of the descent of burden should take place over the focal point of the combustion zone. When the projections of the combustion zones and sectors of maximum concentration of ore are on a horizontal plane, the gas permeability of the burden over the combustion zone will be at a maximum. A comparison of diagrams of changes in the composition of gas along the tuyere axis and corresponding to them, the diagrams

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SOV/135-58-8-4/33

The Influence of the Position of the Combustion Zone on the
Operation of a Blast Furnace

of changes in the composition of gas along the throat radius indicated that there is a definite relationship between the position of the maximum CO_2 content along the throat radius and the position of the focal point of the combustion zone, namely, the two points have a tendency to coincide along a vertical line. When the position of the maximum of CO_2 content in the top gas is shifted, the focal point of the combustion zone is also shifted in the same direction. It was found that the projection of the position of maximum CO_2 along the throat radius onto a horizontal plane, passing through the tuyere axis, is situated at a definite distance from the tuyere nozzle (this was different for the two furnaces investigated). However, there are some limits within which the focal point of the combustion zone can follow the position of the maximum CO_2 content along the throat radius, that is, when the latter is near to the centre or to the wall of the throat. In these cases, the efficiency of evacuation of the combustion products ceases to be the dominating factor and the position

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SOV/137-58-0-4/53

The Influence of the Position of the combustion Zone on the Operation of a Blast Furnace

of the focal point of the combustion zone will be subjected to the influence of other factors. Observations of the operation of furnaces indicated that when the position of maximum CO_2 content along the throat diameter and the combustion zone do not coincide vertically, the utilisation of the gas stream deteriorates (Figure 5). The influence of the parameters of the combustion zone on furnace operation was studied on a flat glass model (scale 1:25, Figure 4). The action of combustion zones was simulated by openings on the tuyere level, through which the burden material (chrome-magnesite, 2-3 mm in size) was flowing out of the model. These formed ellipsoid zones of material with a considerably lower packing density. When the distances of the outflows from the walls were small, the ellipsoid zones were intersected by the walls (Figure 6a). On shifting the outflows towards the centre, the ellipsoid zones did not intersect with walls (Figure 6b). The phenomenon is compared with the operation of furnace Nr 1 on the Nizhne-Saldinskiy Works (working volume 330 m^3 and hearth diameter, 5 m). The furnace

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SCV/133-7-6-4/55

The Influence of the Position of the Combustion Zone on the Operation of a Blast Furnace

was operating peripherally despite changes of charging sequences. Only when the tuyeres were pushed deeper into the furnace and their diameter reduced did its operation improve considerably (i.e. measures were taken to shift the combustion zone towards the centre). The size of the "dead man" also depends on the position of the combustion zones; with increasing distance between two opposite combustion zones the size of the "dead man" increases. The same results are obtained by decreasing the size of the outflow. On the other hand, by increasing the size of outflow, the intersection of the ellipsoid of low packing with walls takes place earlier and a comparatively large part of these zones appears as it was outside the furnace profile. In a blast furnace, this would increase the peripheral working. Thus, a shift of tuyeres deeper into the furnace appears to be more effective in improving the distribution of the gas stream in the furnace than an increase in the size of combustion zones. The pressure of the burden materials on the horizontal plane at tuyere level with increasing height of the burden column was also investigated on the model. The results obtained agreed

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SOV/133-58-0-4/33

The Influence of the Position of the Combustion Zone on the Operation of a Blast Furnace

with the views on the behaviour of granular materials during their flow (Ref 19). On the basis of the results obtained the following conclusions are drawn: 1) the position of the focal point of the combustion zone of a normally operating furnace depends not only on the temperature and volume of the blast but also on the position of zones of the most intensive formation of molten masses; 2) The distribution of burden materials in the furnace throat should be related to the position of the combustion zones; 3) A rational protrusion of tuyeres helps in containing the ellipsoid zones into the furnace profile; 4) The influence of the bosh on the descent of materials is insignificant and with a correct co-ordination of the furnace profile with the ellipsoid zones - completely absent; 5) The optimum position of the maximum CO_2 content along the throat diameter in relation to the position of combustion zones should be experimentally determined for each furnace.

Card 7/8

SOV/131-74-1-1/55

The Influence of the Position of the Combustion Zone on the
Operation of a Blast Furnace

There are 6 figures and 21 Soviet references including 2
English in Russian translation.

1. Blast furnaces--Performance 2. Combustion--Applications

Card 8/8

GRUZINOV, V.K., dots., kand.tekhn.nauk

Dimensions of zones of loosening in blast furnace burden columns.
Izv.vys.ucheb.zav.; chern.met. no.8:3-6 Ag '58. (MIRA 11:11)

1. Ural'skiy politekhnicheskii institut.
(Blast furnaces)

FIALKOV, B.S. inzh.; GRUZINOV, V.K., doktor tekhn. nauk

Place of the combustion zone and its effect on blast furnace
performance [with summary in English]. Stal' 18 no. 6:495-502
Je '58.

(MIRA 11:7)

(Blast furnaces)

SOV/137-59-5-9794

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, pp 44 - 45
(USSR)

AUTHOR: Gruzinov, V.K.

TITLE: Correlations Between the Structure of the Charge Column and the Gas Flow in Blast Furnaces

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1958, Vol 73, pp 123 - 159

ABSTRACT: The author points out that many existing notions on factors determining the motion of materials in blast furnaces need to be reconsidered. The author stresses the important part of the smelting process as one of those factors. It is suggested to consider the motion of materials into combustion seats by analogy with the theory developed by G.M. Malakhov on the outlet of ores from the bin through hatches. The author notes the overestimation of the loosening effect of inclined shaft walls and of the deviation from the vertical of the charge motion. It is shown by calculations and observations on a model that small and large lumps of the material under the effect of a strong gas flow are deflected towards the

Card 1/2

SOV/137-59-5-9794

Correlation Between the Structure of the Charge Column and the Gas Flow in Blast Furnaces

furnace walls if they are poured from a large cone. The character of the material distribution on the throat depends mainly on the rate of the gas flow. It is pointed out that if the charged materials roll down along the charge slope, a considerable portion of particles must be displaced upwards. The blast furnace operation is controlled by changes in the ratio of ore charge component to the coke component. It is recommended to increase the weight (of one cubic meter) of the ore and sinter and to reduce the ratio of the ore component to the coke one. The distribution in the horizontal direction was investigated and the deficiency of the McKee distributor was detected. It is recommended to use eight rotating stations instead of six. Experiments on a blast furnace model showed the absence of mass displacements of the particles in the horizontal plane when homogeneous materials were poured from a large cone into the blast furnace. Data are presented on the efficiency of gas flow control in a series of blast furnaces. Steady operation of the blast furnace is one of the basic conditions to obtain high efficiency of the gas flow control by changes in the charge. Efficiency of the charge control can be considerably raised by automated composition of the charge.

M.O.

Card 2/2

GRUZINOV, Vladimir Konstantinovich; LEONIDOV, N.K., kand.tekhn.nauk,
retsensent; GRIGOR'YEV, G.G., kand.tekhn.nauk, red.; DUGINA,
N.A., tekhn.red.

[Mechanical equipment of blast furnace plants] Mekhanicheskoe
oborudovanie domennykh tsukhov. Izd.2., perer. Moskva, Gos.
nauchno-tekhn.izd-vo mashinostroit.lit-ry. Pt.2. 1959. 320 p.
'MIRA 12:9)

(Blast furnaces--Equipment and supplies)

18 (7)

AUTHORS: Korotich, V. I., Gruzinov, V. K. SOV/163-59-2-46/48

TITLE: The Application of Tensometry in an Apparatus for Investigating the Kinetics of Reactions (Ispol'zovaniye tenzometrii v apparature dlya issledovaniya kinetiki reaktsiy)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 2, pp 250 - 251 (USSR)

ABSTRACT: The method developed in the institute mentioned under "Association" is based on the measurement of the elastic deformation of a steel ruler by tensometer feelers. The apparatus is shown in figure 1. The steel ruler is clamped fast at one end, the sample to be investigated is hung to the other end. The bending of the ruler by the weight of the sample is measured by means of the resistance change of 4 (2 upper and 2 lower) tensometer feelers. The scheme of the measuring bridge circuit according to the zero method is shown in figure 2. The authors see the advantage of this apparatus in the fact that - in contrast to balances - the sample remains hanging during the reaction to be investigated, making possible a continuous measurement of weight changes. The apparatus originally built for the investigation of reduction processes can also be applied to other

Card 1/2

The Application of Tensometry in an Apparatus for
Investigating the Kinetics of Reactions

SOV/163-59-2-46/48

fields. There are 2 figures and 2 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: July 17, 1958

Card 2/2

PHASE I BOOK EXPLOITATION

80V/4684

Gruzinov, Vladimir Konstantinovich

Upravleniye gazovym potokom v domennoy pechi programmoy zagruzkoy (Gas-Transit Control in Blast Furnaces by Programmed Charging) Sverdlovsk, Metallurgizdat, Sverdlovskoye otd-niye, 1960. 214 p. Errata slip inserted. 3,150 copies printed.

Reviewer: V.G. Manchinskiy; Ed.: S.I. Sharov; Ed. of Publishing House: M.M. Syrchina; Tech. Ed.: R.M. Matlyuk.

PURPOSE: This book is intended for engineers working in blast-furnace operations and in scientific research institutes; it may be useful to students of metallurgy at schools of higher technical education.

COVERAGE: The book deals with theoretical principles of gas-transit control in blast furnaces. The author discusses the stock composition in the shaft, analyzes changes in its structure occurring under the influence of various factors, and describes the physical characteristics of stock passage. Also

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Gas-Transit Control (Cont.)

80V/4684

discussed are methods and techniques of gas-transit control in operation at the larger blast furnaces. Prospects for the development of gas-transit control by means of programmed distribution of raw materials are considered. The author thanks Docent V.G. Manchinskiy, Candidate of Technical Sciences, who reviewed the manuscript, Professor S.I. Sharov, Doctor of Technical Sciences, who edited the book, and Profs. A.I. Razm and A.N. Pokhvisnev, Doctors of Technical Sciences, for their observations regarding the book. There are 151 references: 132 Soviet, 15 English and 4 German.

TABLE OF CONTENTS:

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PART I. THEORETICAL FUNDAMENTALS OF GAS-TRANSIT CONTROL IN A BLAST FURNACE	
Ch. I. Development of Theory and Practice in Distribution of Raw Materials and Gas-Transit Control	5
Ch. II. Formation of the Stockline and the Structure of the Stock Column in the Shaft of a Blast Furnace	19
1. Moving of charge materials on [the surface of] the bell	19

Card 2/6

GRUZINOV, V.K.

Determining the trajectory of the fall of materials from the
large bell of a blast furnace charging device. Izv.vys.ucheb.
zav.; chern.met. no.5:22-27 '60. (MIRA 13:6)

1. Ural'skiy politekhnicheskii institut.
(Blast furnaces)

FIALKOV, B.S.; GRUZINOV, V.K.

Rate of outflow of loose materials from openings and the shape of
the zone of loosening. Izv. vys. ucheb. zav.; chern. met. no.12:
17-22 '60. (MIRA 14:1)

1. Ural'skiy politekhnicheskiy institut.
(Granular materials)

KOROTICH, V.I.; GRUZINOV, V.K.

Design of standard equipment for determination of the
reducibility of iron ore sinters. Stal' 20 no.8:694-695
Ag '60. (MIRA 13:7)

1. Ural'skiy politekhnicheskiy institut.
(Iron--Metallurgy)

S/133/60/000/011/003/023
A054/A029

AUTHORS: Grekov, P.N., Gruzinov, V.K., Lazarev, B.L.

TITLE: Rational Arrangement of Transmitters for Automatic Control of the Horizontal Distribution of the Charge

PERIODICAL: Stal', 1960, No. 11, pp 977-980

TEXT: The accuracy and the quick reaction of the automatic control system of the revolving distribution of the charge primarily depends on the sensitivity, the accuracy and the long useful life of nickel-cobalt and "alume" (an alloy containing Ni, Al, Mn, Si and Co) thermocouples which are usually arranged on the upper level of the furnace brickwork under the armor plates. For several reasons, however, this arrangement does not insure sufficient sensitivity of the thermocouples, which are placed in thick-walled protective tubes, arranged 2-2.5 m below the level of the charge; the changes in the distribution of the materials in the charge are, therefore, indicated only with a considerable delay. The thermocouples, consequently, record only very considerable fluctuations in the distribution of materials and of the gas flow on the periphery of the furnace. Moreover, the useful life of these thermocouples does not exceed 5-6 months, mainly on account of the sooty carbon

V

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S/133/60/000/011/003/023
A054/A029

Rational Arrangement of Transmitters for Automatic Control of the Horizontal
Distribution of the Charge

deposits in the protective tubes which compress the casing of the thermocouples, thus deforming them and damaging the insulation of the thermoelectrodes. Tests were carried out to eliminate these drawbacks by arranging a large number of thermocouples (6,8,12 and more) in the vault of the blast furnace above the armor plates. By analyzing the factors influencing the operation of thermocouples placed above the charge level, it was found that the operation of the revolving distributor greatly affects the change of readings of the conditions on the furnace periphery only if the materials fed into the furnace are distributed evenly. However, the diagrams representing the readings of these thermocouples are not suitable to locate gaps in the charge. In order to facilitate the location of gaps, the thermocouples arranged according to the new system are connected into batteries; moreover, a change-over switch was included in the system. The gap in the charge can very easily be located on the periphery of the furnace by one of the two positions of this change-over switch, in which the electromotive force of the thermocouples connected in the battery is zero. This new arrangement of the thermocouples greatly improves the sensitivity, accuracy and reliability of the control system of the revolving distributor. Card 2/3

S/133/60/000/011/003/023
A054/A029

Rational Arrangement of Transmitters for Automatic Control of the Horizontal
Distribution of the Charge

buter. There are 8 figures and 4 Soviet references.

ASSOCIATION: Ural'skiy polytekhnicheskii institut (Ural Polytechnical
Institute) and NMTK

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Card 3/3

GREKOV, P.N.; GRUZINOV, V.K.; KORNEV, V.K.

Effect of small fractions on the resistance of charge materials to
the flow of gases. Trudy Ural. politekh. inst. no.105:30-36 '60.
(MIRA 14:3)

(Blast furnaces—Aerodynamics)

GREKOV, P.N.; GRUZINOV, V.K.; KOHNLY, V.K.

Methods of testing the gas-dynamic properties of charge materials.
Izv. vys. ucheb. zav.; Chern. met. no. 1:41-45 '61.

(MIRA 14:2)

1. Ural'skiy politekhnicheskii institut.
(Blast furnaces—Equipment and supplies)
(Gas flow)

FIALKOV, B.S., inzh.; GRUZINOV, V.K. doktor tekhn.nauk

Speed of extracting loose material from an opening and the shape of the zone of disintegration. Izv.vys.ucheb.zav.; gor.zhur. no.2:9-20 '61.

(MIRA 14:3)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova.
Rekomendovana kafedroy metallurgii chuguna Ural'skogo politekhnicheskogo instituta.

(Granular materials)

FIALKOV, B.S.; GRUZINOV, V.K. Prinimal uchastiye KOLBIN, G.V.

Control of the movement of charge materials above the combustion zone. Izv. vys. ucheb. zav.; chern. met. 4 no.10:19-25 '61.

(MIRA 14:11)

1. Ural'skiy politekhnicheskiy institut.
(Blast furnaces) (Oscillators, Crystal)

FIAIKOV, B.S.; GRUZINOV, V.K.

Changes in the structure of a layer under the effect of its movement.
Izv. vys. ucheb. zav.; chern. met. 4 no.12:18-26 '61.

(MIRA 15:1)

1. Ural'skiy politekhnicheskii institut.

(Blast furnaces--Models)

GREKOVA, N.S.; GRUZINOV, V.K.

Selecting the amount of feed depending on blast furnace capacity
for the design of skip winches. Stal.' 22 no.12:1072 D '62.

(MIRA 15:12)

1. Ural'skiy politekhnicheskii institut.

(Blast furnaces—Equipment and supplies)

GREKOV, P.N.; GRUZINOV, V.K.; MAKHANEK, N.G.

Changes of friction forces in a layer of granular materials
depending on the rate of gas flow through it. Izv. vys. ucheb.
zav.; chern. met. 6 no.6:32-34 '63. (MIRA 16:8)

1. Ural'skiy politekhnicheskiy institut.
(Granular materials) (Gas flow)

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Izv. vys. ucheb. zav.; chern. met. 6 no.7:39-46 '63. (MIRA 16:9)

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GROZINOV, V.F., pseudonym; IZHTHILY, V.I.

Systems of charge feed for new blast furnaces. Vest. AN Kazakh.
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GRUZINOV, V.N., akademik; MIKHAYLOV, V.V., akademik; KUBITSA, I.S., kandyd.
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Zonal distribution of hydrological characteristics in the Atlantic
Ocean. Trudy MGI 19:93-102 '60. (MIRA 14:7)
(Atlantic Ocean—Ocean temperature) (Atlantic Ocean—Salinity)

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Some hydrological features of the Sargasso Sea. Meteor.i gidrol.
no.7:32-35 J1 '61. (MIRA 14:6)
(Sargasso Sea—Hydrology)

ACCESSION NR: AR4015487

8/0169/63/000/012/V019/V020

SOURCE: RZh. Geofizika, Abs. 12V115

AUTHOR: Gruzinov, V. M.

TITLE: On the calculation of corrections for depth based on the deviation of actual from calculated speed during echosounding

CITED SOURCE: Tr. Morsk. gidrofiz. in-ta. AN USSR, v. 28, 1963, 92-98

TOPIC TAGS: echosounding, fathometer readings, speed of sound, fathometer correction, Del Grosso, Matthew tables, sound in water, hydrological stations, Mikhail Lomonosov, Zubov tables

TRANSLATION: The variation of correction for depth on the speed of sound depending on the sources used for the calculations is investigated. For calculations the speed of sound is taken as 1500 m/sec, the standard for all modern Soviet fathometers. The calculations made were for 11 deepwater hydrological stations made during the second voyage of the expeditionary ship Mikhail Lomonosov in March-April 1958 and for 11 repeated stations made at the same points by the same ship in October-November 1958. A comparison of the results established how much the results

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